

## **METHOD AND APPARATUS FOR CONTENTION MANAGEMENT IN A RADIO-BASED PACKET NETWORK**

### **ABSTRACT OF THE DISCLOSURE**

In a mesh communication network, a poll request protocol (PRP) is provided  
5 in which a special packet is broadcast by the congested node when it is ready to provide services. The controlling node (usually the more congested node) broadcasts a packet to request poll signals from nodes desiring resources of the controlling node. The contending nodes then have equal chances to request the services of the controlling node by sending poll signals. The controlling node can then arbitrate the requests, determine the most fair and  
10 efficient use of its resources, and broadcast a scheduling packet to inform the contending nodes when to inform the contending nodes of controlling node scheduling. The contending nodes then send their packets to the controlling node without lost packets caused by congestion collisions. The controlling node can then send data to the contending nodes also without lost packets.

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